

VMG1312-B10A/ B10B

Firmware Release Note

V1.00(AAJZ.6)C1

Date: May 14, 2015
Author: Ricky Fan
Reviewer: Wood Huang

THIS DOCUMENT CONTAINS PROPRIETARY TECHNICAL INFORMATION THAT IS THE PROPERTY OF THE ZyXEL AND SHOULD NOT BE DISCLOSED TO OTHERS IN WHOLE OR IN PART, REPRODUCED, COPIED, OR USED AS BASIS FOR DESIGN, MANUFACTURING OR SALE OF APPARATUS WITHOUT WRITTEN PERMISSION OF ZyXEL.

TABLE OF CONTENTS

REVISION HISTORY	4
SUPPORTED PLATFORMS:	5
VERSIONS:	5
NOTES:	5
FEATURES LIST:	5
MODIFICATIONS IN V1.00(AAJZ.6)C1 05/14/2015	5
MODIFICATIONS IN V1.00(AAJZ.6)C0 05/13/2015	5
MODIFICATIONS IN V1.00(AAJZ.6)B3 05/06/2015	6
MODIFICATIONS IN V1.00(AAJZ.6)B2 04/22/2015	6
MODIFICATIONS IN V1.00(AAJZ.6)B1 04/02/2015	6
MODIFICATIONS IN V1.00(AAJZ.5)C0 04/01/2015	7
MODIFICATIONS IN V1.00(AAJZ.5)B2 03/27/2015	7
MODIFICATIONS IN V1.00(AAJZ.5)B1 03/13/2015	7
MODIFICATIONS IN V1.00(AAJZ.4)C0 12/18/2014	7
MODIFICATIONS IN V1.00(AAJZ.4)B3 12/11/2014	8
MODIFICATIONS IN V1.00(AAJZ.4)B2 11/21/2014	8
MODIFICATIONS IN V1.00(AAJZ.4)B1 11/12/2014	8
MODIFICATIONS IN V1.00(AAJZ.3)C0 09/16/2014	10
MODIFICATIONS IN V1.00(AAJZ.3)B1 09/05/2014	10
MODIFICATIONS IN V1.00(AAJZ.2)C0 08/26/2014	10
MODIFICATIONS IN V1.00(AAJZ.2)B1_F0 08/15/2014	11
MODIFICATIONS IN V1.00(AAJZ.1)C0 07/08/2014	11
MODIFICATIONS IN V1.00(AAJZ.1)B4 06/30/2014	11
MODIFICATIONS IN V1.00(AAJZ.1)B3 05/22/2014	12
MODIFICATIONS IN V1.00(AAJZ.1)B2 05/02/2014	13
MODIFICATIONS IN 1.00(AAJZ.1)B1 04/07/2014	15

DEFAULT SETTINGS IN V1.00(AAJZ.6)C1	16
PUBLIC DOMAIN SOFTWARE ANNOUNCEMENTS	17

Revision History

Date	Release	Author	Description
2014/04/07	2.00	Cj_Lai	FW release for 1.00(AAJZ.1)b1
2014/05/02	2.10	Wood Huang	FW release for V1.00(AAJZ.1)b2
2014/05/27	2.11	Cj_Lai	FW release for V1.00(AAJZ.1)b3
2014/06/30	2.12	Cj_Lai	FW release for V1.00(AAJZ.1)b4
2014/07/09	2.13	Cj_Lai	FW release for V1.00(AAJZ.1)C0
2014/08/26	3.00	Cj_Lai	FW release for V1.00(AAJZ.2)C0
2014/09/05	3.01	Cj_Lai	FW release for V1.00(AAJZ.3)b1
2014/09/05	3.02	Cj_Lai	FW release for V1.00(AAJZ.3)C0
2014/11/12	3.03	Cj_Lai	FW release for V1.00(AAJZ.4)b1
2014/11/21	3.04	Cj_Lai	FW release for V1.00(AAJZ.4)b2
2014/12/11	3.05	Cj_Lai	FW release for V1.00(AAJZ.4)b3
2014/12/11	3.06	Cj_Lai	FW release for V1.00(AAJZ.4)C0
2015/03/13	3.07	Cj_Lai	FW release for V1.00(AAJZ.5)b1
2015/03/27	3.08	Cj_Lai	FW release for V1.00(AAJZ.5)b2
2015/04/01	3.09	Cj_Lai	FW release for V1.00(AAJZ.5)C0
2015/04/02	3.10	Cj_Lai	FW release for V1.00(AAJZ.6)b1
2015/04/22	3.11	Ricky_Fan	FW release for V1.00(AAJZ.6)b2
2015/05/06	3.12	Ricky_Fan	FW release for V1.00(AAJZ.6)b3
2015/05/13	3.13	Ricky_Fan	FW release for V1.00(AAJZ.6)C0
2015/05/14	3.14	Ricky_Fan	FW release for V1.00(AAJZ.6)C1

ZyXEL VMG1312-B10A/B10B Generic V1.00(AAJZ.6)C1 Release Note

Date: May 14, 2015

Supported Platforms:

ZyXEL VMG1312-B10A & VMG1312-B10B

Versions:

Bootbase version: V1.61 | 03/17/2015 09:57:30

Internal Firmware version: V1.00(AAJZ.6)C1

External Firmware version : V1.00(AAJZ.6)C1

Kernel version: 2.6.30

DSL mode code version: A2pv6F039o

DSL driver version: d26a

WLAN code version: 6.30.163.23.cpe4.12L06B.1

Voice code version: 4.12L.06 May 11 2012 11:58:17 IPTK 8.2.2

3G dongle WWAN package version: V1.11

APP agent version : 1.0.1

Notes:

Features list:

Modifications in V1.00(AAJZ.6)C1 | 05/14/2015

Base on V1.00(AAJZ.6)C0 source to release V1.00(AAJZ.6)C1 beta version.

[FEATURE ENHANCED]

1. SNMP default vale should be disabled

Modifications in V1.00(AAJZ.6)C0 | 05/13/2015

Base on V1.00(AAJZ.6) b3 source to release V1.00(AAJZ.6)C0 beta version.

Modifications in V1.00(AAJZ.6)b3 | 05/06/2015

Base on V1.00(AAJZ.6)b2 source to release V1.00(AAJZ.6)b3 beta version.

[FEATURE ENHANCED]

2. [ITS: 150301102] Add firmware version into adsl COE

[BUG FIX]

1. [ITS: 150400843] After upgrade FW from old firmware. The supervisor's password and ACS password will become strange value.

Modifications in V1.00(AAJZ.6)b2 | 04/22/2015

Base on V1.00(AAJZ.6)b1 source to release V1.00(AAJZ.6)b2 beta version.

[BUG FIX]

3. [EtherWAN GUI page] Remove or change one of the Note message.
4. [#SVD No:142] Virtual Device display wrong housing.
5. [#SVD No:179] Should support "myzyxel.in.th" in DynDNS Service Provider Condition.
6. [#SVD No:182] Mac filter restrict mode didn't match with title.

Modifications in V1.00(AAJZ.6)b1 | 04/02/2015

Base on V1.00(AAJZ.5)C0 source to release V1.00(AAJZ.6)b1 beta version.

[BUG FIX]

1. [ITS: 140900937] No Device logs are displayed when you do a GPV for the parameter InternetGatewayDevice.DeviceInfo.DeviceLog. Unable to see any device logs via TR069.
2. [ITS: 150100953] Customer setting the device to connect the ACS server, and backup config, upload the config with multiboot tool, the device can't connect the ACS server.
3. [ITS: 150200435] South African Default Settings.(already release on 100AAJZ4D1)
4. [ITS: 150200352] Can't configure EthWAN via TR069. (Please follow the attach file: Set EthWAN and PPPoE via TR069)
5. [SPRID: 150114857] Another the LAN can't get IP from DUT, when DHCP server pool=2.

6. [ITS: 150100367] DHCP Relay can't works. LAN&WAN has same IP address and has been configured DHCP relay.

[FEATURE ENHANCED]

1. Support WWAN 3G package v1.11

Add dongle list:

1. ZyXEL 3D1440
2. Huawei E397Bu-502 (have no sample)
3. Huawei EC178-5 (have no sample)

Modifications in V1.00(AAJZ.5)C0 | 04/01/2015

Base on V1.00(AAJZ.5)b2 source to release V1.00(AAJZ.5)C0 FCS version.

Modifications in V1.00(AAJZ.5)b2 | 03/27/2015

Base on V1.00(AAJZ.5)b1 source to release V1.00(AAJZ.5)b2 version.

[BUG FIX]

1. [#SVD No:130] Sometimes DUT can't bootup via TR-069 download firmware.
2. [#SVD No:131] WPS PBC SW button does not work after use WPS HW button.
3. [#SVD No:132] WLAN no security does not work after specific steps.
4. [#SVD No:173] In Log setting page, GUI don't have IPsec option but security log have.

Modifications in V1.00(AAJZ.5)b1 | 03/13/2015

Base on V1.00(AAJZ.4)C0 and V1.00(AAKL.8)b4 source to release V1.00(AAJZ.5)b1 version.

[BUG FIX]

1. [ITS:#141200518] [TSF] VMG1312-B10A LAN1 interface speed issue.
2. Device reboot issue by booting up with TE rom-file.

[FEATURE MODIFY]

1. Adding capital V in the front of FW ID.

Modifications in V1.00(AAJZ.4)C0 | 12/18/2014

Base on V1.00(AAJZ.4)b3 source to release V1.00(AAJZ.4)C0 version.

Modifications in V1.00(AAJZ.4)b3 | 12/11/2014

Base on V1.00(AAJZ.4)b2 source to release V1.00(AAJZ.4)b3 version.

[BUG FIX]

1. [ITS# 141200040] Wifi password mangled after upgrade FW from V1.00(AAJZ.3)C0 or before.

[FEATURE ENHANCED]

1. Support WWAN 3G package v1.08.

Add dongle list:

HUAWEI E303h-1

HUAWEI E3131Cs-2

E3272s-153

E3276s-150

HUAWEI E220 (have no sample)

ZTE MF193A (have no sample)

Modifications in V1.00(AAJZ.4)b2 | 11/21/2014

1. Base on V1.00(AAJZ.4)b1 source to release V1.00(AAJZ.4)b2version.

[BUG FIX]

1. [SPRID: 141114824] Autodetect WAN function can not work.
2. [SPRID: 141114825] The Media Server can not work.
3. #Add back user account in /etc/passwd due to it's used by dnsmasq and can cause DNS function not work.

Modifications in V1.00(AAJZ.4)b1 | 11/12/2014

[BUG FIX]

1. [ITS: 141000467] Fixed PPP daemon did not work after change PPP username/passwords by TR069.
2. [SPRID: 140922334] Can't scan fix wireless LAN Channels.
3. [SPRID: 140922332] More Wireless AP can't surf the Internet.
4. [SPRID: 140924511] VMG1312-B10B LAN port number can't match DUT outer shell.
5. [ITS:140800187] Displays 'loading' when you select upload while there is nothing on the file path on firmware upgrade.
6. [ITS:140701326]Dynamic DNS not working. (1)When I enable the DDNS and fill in the

username/password by silver/silver , after apply that the GUI will display "password require the minimum length of 6 characters(mixed alphabetic and numeric)" (2) I also set the username/password by silver123/silver123 , after apply that the GUI will display "Hostname is invalid" .

7. [ITS:140500036]Some setting can't saved in backup configuration file. Condition: 1. use admin level account login GUI.2. change setting in log setting page.3. backup configuration4. upload the configuration from GUI.5. find the configuration of log setting page not be saved.
8. [ITS:140900930]Huawei E3131s-2 cannot be detected, Web GUI show "NoDevice".
9. [ITS:140900818]3G parameters not found in TR069 data model.
 - InternetGatewayDevice.WANDevice.7.WANConnectionDevice.1.X_5067F0_WWANInterfaceConfig.PINCode :
 - InternetGatewayDevice.WANDevice.7.WANConnectionDevice.1.X_5067F0_WWANInterfaceConfig.PUKCode :
 - InternetGatewayDevice.WANDevice.7.WANConnectionDevice.1.X_5067F0_WWANInterfaceConfig.PhoneNumber : *99#
 - InternetGatewayDevice.WANDevice.7.WANConnectionDevice.1.X_5067F0_WWANInterfaceConfig.PowerUpTimeout : 20
 - InternetGatewayDevice.WANDevice.7.WANConnectionDevice.1.X_5067F0_WWANInterfaceConfig.Ready3g : 0
 - InternetGatewayDevice.WANDevice.7.WANConnectionDevice.1.X_5067F0_WWANInterfaceConfig.Status : NoDevice
10. [ITS:141000233]when you access the Time page with browser IE 11 that the page will keep on sliding to the right of the screen.
11. [ITS:141000453]RSA customer reported few spelling and grammar errors on wireless security page (As attached file: Spelling and Grammar issue on Security page)
12. **HT-Mostar** [ITS:141000186] When I turn off from power one of STBs, VMG resets and DSL line can't be synced after boot. Everything works when I manually reboot VMG one more time. Console log is in the attachment with sequence: STBs on and video playing -> STB off -> VMG self reboot -> VMG boot finish with no DSL sync.
13. [ITS:140600099] TR-069 Logs not displayed under the System Monitor.

[FEATURE MODIFY]

1. [ITS: 141000627] IPsec should not be listed in Log as VMG1312-B10A does not support IPsec.

2.

[FEATURE ENHANCED]

Modifications in V1.00(AAJZ.3)C0 | 09/16/2014

1. Base on V1.00(AAJZ.3)b1 to release V1.00(AAJZ.3)C0 version.
2. Modify the default romfile for VMG1312-B10A Generic.

Modifications in V1.00(AAJZ.3)b1 | 09/05/2014

3. Base on V1.00(AAJZ.2)C0 to release V1.00(AAJZ.3)b1 version.
4. Modify the default romfile for VMG1312-B10A Generic.

[BUG FIX]

1. [SPRID:140728099] DUT often can't upgrade V1.00(AAJZ.2)F0 successfully from GUI.
Memory leakage : current FW 1.00(AAJZ.2)F0 has high possibility upgrade failure via GUI.
2. SSID length: we would like to keep the original genkey rule to keep the last 5 digits of SN.
3. [SPRID:140821477] DHCPv6 wan function can't work.
4. [SPRID:140821478] 6RD function can't work.
5. [SPRID:140820417] On File Sharing , account management function cannot work.
6. [SPRID:140703253] Wireless Channel Status page issue.
7. [ITS: 140701419] Concurrent WAN , When trying to reconfigure LAN interface 4 to be in bridge group with VDSL2 WAN Node, CPE gives error message "Failed to add L2 interface".
8. [ITS: 140701418] Support ConCurrent WAN feature in Broadband > WAN interface Edit for ADSL , VDSL ,EthWAN. (The default broadband interface need apply as default gateway)
9. [ISKON] Dynamic option 60 interface group can't work well.
10. [HT-Mostar] which ACS PPPoE can't set for inactive interface (ADSL or VDSL) the username can't be change by TR069.

Modifications in V1.00(AAJZ.2)C0 | 08/26/2014

5. Base on V1.00(AAJZ.2)F0 to release V1.00(AAJZ.2)C0 version.

6. Modify the default romfile for VMG1312-B10A Generic.

Modifications in V1.00(AAJZ.2)b1_F0 | 08/15/2014

1. V1.00(AAJZ.1)C0 to release V1.00(AAJZ.2)b1_F0 version.

[BUG FIX]

1. [MSTC TE] Fixed the VMG1312/5313 LAN 4 port with 1000M NIC IOP issue.
2. [Polska] Fixed Port Forwarding not work issue.
3. [Polska] Quick Start Wizard can't save configure after CPE reboot.
4. ROM-D and ROM file can't upgrade by ExpressBoot (Modify the PSI size to 128k).
5. Config lose when Firmware upgrade from V1.00(AAJZ.0)C0 to V1.00(AAJZ.1)C0.

Modifications in V1.00(AAJZ.1)C0 | 07/08/2014

1. Base on V1.00(AAJZ.1)b4 to release FCS version.

Modifications in V1.00(AAJZ.1)b4 | 06/30/2014

[BUG FIX]

1. [SPVD NO: 111] Incorrect CPE picture in Traffic Status page.
2. [SPVD NO: 104] WPS doesn't work. (Fixed the WPS web page) and (When verify at shielding room the WPS is work well)
3. [SPVD NO: 101] Incorrect typo of SSID Subnet in More AP webpage.
4. [SPVD NO: 100] Need to modify the "Notes" description in "WPS" webpage.
5. [SPVD NO: 83] VoIP should remove in Log Setting webpage.
6. [SPVD NO: 72] Auto Switch Off can't work on all LAN port, and Ethernet WAN.(PM decide just fixed the all LAN and Ethernet WAN)
7. [SPVD NO: 71] Power Management can't work on all LAN port.
8. [SPVD NO: 64] Press the reset button to reboot can't work well.
9. [SPVD NO: 56] Wizard DNS static IP address doesn't match with broadband DNS static IP address.
10. [SPVD NO: 39] To delete ConcurrentWAN interface, the ADSL WAN Interface still enable con-current WAN.
11. [SPVD NO: 38] ADSL WAN Interface with enable con-current WAN can't add more one rule.
12. [SPVD NO: 35] Con-current WAN port will change, after add a new ADSL with enable con-current WAN.

13. [SPVD NO: 36] Description of Wizard window have typing error.
14. [SPVD NO: 24] Need to press the reset button over 10 seconds to restore factory default.(PS doc define 5sec)
15. [SPVD NO: 20] Unable upgrade FW by FTP.
16. [SPVD NO: 13] End-user can't add an Ethernet WAN connection when Ethernet WAN state is "Disable".
17. [SPVD NO: 9] Incorrect display of MTU Size.
18. [SPVD NO: 6] Product Model should be VMG1312-B10A.
19. [SPVD NO: 7] Incorrect display of Firmware Version.
20. [ITS:# 140300667] VMG1312 LAN services exposed to WAN issue fix.

[FEATURE MODIFY]

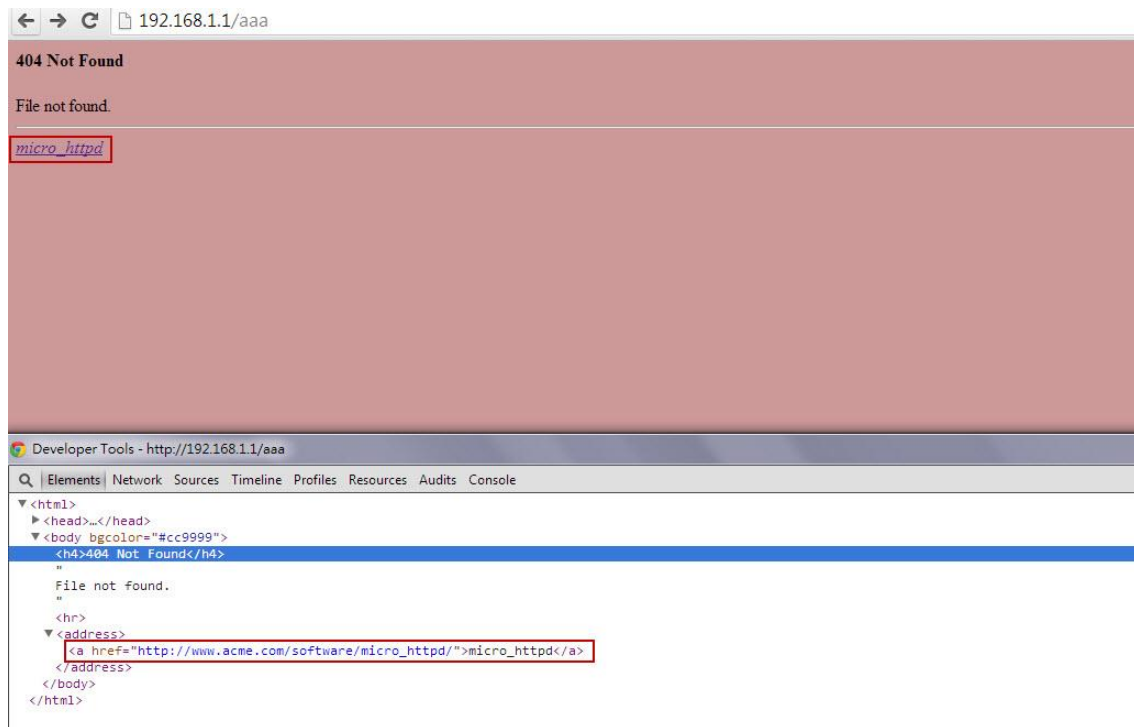
[FEATURE ENHANCED]

1. Support mini code feature.
2. Support MXIC flash.

Modifications in V1.00(AAJZ.1)b3 | 05/22/2014

[BUG FIX]

1. [SPRID: 140411526] default setting issue.
2. [ITS: 140500620] Possible to login without knowing the password.
3. Strange link issue.



[FEATURE MODIFIED]

1. Remove time zone setting in quick start wizard.
2. Support the Con-current WAN feature.

Modifications in V1.00(AAJZ.1)b2 | 05/02/2014

The beta FW 1.00(AAJZ.1)b2 base on 1.00(AAKL.5)b1.

[FEATURE ENHANCED]

7. [TR69] Add a Landing Page and set by TR069.
8. [GUI] Display the Serial Number to the status page.
9. [ROM-D] Support supervisor can save/clean configuration to ROM-D via GUI in Configuration ROM-D page.
10. [CLI] support wan edit command to Enable/Disable VLAN tag
wan edit servicename <name> [--vlan <disable>]
wan edit servicename <name> [--vlan <vlan id>]
wan edit servicename <name> [--8021pq <0~7> <vlan id>]
11. [CLI] provide CLI command to enable or disable the DHCP server assign LAN IP by mac hash method for first link PC . If local side PC already be linked on CPE then need to

reboot CPE active this feature.

dhcpcmachash <enable|disable>

dhcpcmachash show

dhcpcmachash help

12. [CLI] Use CLI command to disable the WLAN and WPS physical button
buttondisable <1|0>
buttondisable show
13. [DHCP] Add DHCP OPTION 66 and user can set DHCP OPTION 66 value in GUI
(Home Networking->TFTP Server Name)
14. [GUI] Display the static route rules on the Routing page which is learning from DHCP
option 121.
15. [DSL] Support DSL Modulation, Bitswap and SRA via GUI
16. [WAN] Support a concurrent WAN automatic create by Broadband WAN interface Add &
Edit.

[BUG FIX]

1. [SPRID:# 140411515][HW Button] It can't enable/disable Wireless LAN by Hardware
button (press 1 second).
2. [SPRID:# 140411517][GUI] There is no image in the Virtual Device page.
3. [SPRID:# 140411471][CLI] CLI command sys usb can't work.
4. [SPRID:# 140411524][Parent Control] Added 3 internet access schedule
Time(Start-End) rules and clicked + icon, the GUI would show "Table is full, max list
number is 5".
5. [SPRID:# 140414580][LAN] We couldn't ping the DUT from LAN when Deny Ping
Response is enabled.
6. [SPRID:# 140414596][Diagnostic] The Ping and Trace Route can't work by using the
URL.
7. [SPRID:# 140414597][WAN] The Internet LED can't brighten when the Ether WAN
linked up.
8. [SPRID:# 140414600][Parental Control] The Parental Control can't work while the
service name choose HTTP and HTTPS.
9. [SPRID:# 140411514][HW Button] Press Hardware RESET button for 2 seconds can't
reboot the system and press 10 seconds will be factory defaults.
10. [SPRID:# 140416717][File Sharing] The SAMBA can't show all files in the USB.
11. [SPRID:# 140416719][Printer] The printer can't work.
12. [ITS:# 140104855][TR69] OUI should be capital letters.

13. [ITS:# 121003315][Interface group] Interface group leak.
14. [SPRID:# 140411471][CLI] CLI command sys usb can't work. The VMG1312-B10A not support this CLI command.

Modifications in 1.00(AAJZ.1)b1 | 04/07/2014

The beta FW 1.00(AAJZ.1)b1 base on 1.00(AAKL.4)b2.

[FEATURE ENHANCED]

1. Upgrade modem code: to latest modem code : CLI command : adsl --version
2. support passwords in clear text when uploading configure files
3. Parental Control : (1) Add more access-periods (Max. 3) . (2) Apply same PCP to several clients (Max. 5).
4. Ability to turn on/off LEDs.
5. Add more device-icons in the Network Map as VMG8924-B10A.
6. Schedule for firewall rules, close also active connections while schedule activates.
7. ACS Server URL Support IPv4.
8. Enable support for Passive FTP from External client behind NAT.
9. Default setting follows defined at ZyXEL Linux distribution.
10. Landing Page : Device to intercept first HTTP traffic and redirect to a configured URL, Idea is for URL to configured in config file flashed by distribution partner (Landing Page) and this URL can also be configured via TR-069. Landing Page function can also be enabled via TR-069. InternetGatewayDevice.X_404A03_AccessServiceCfg. CustomerWebRedirection. As: <http://www.cwb.gov.tw>
11. Vlan Interface grouping.
12. TR069 Follow VMG8924-B10A which support "Multi-WAN".
13. 3G dongle extend to max 7 dongles and add a "and others" since dongle vendor really put lots of series dongle together and it will be good to show more in our GUI.
14. Support APP installation/configuration.

[FEATURE MODIFIED]

1. Remote MGMT as VMG1312-B10A V100(AAJZ.0)C0.
2. Parental control as VMG1312-B10A V100(AAJZ.0)C0 "White list (Allow the http web URLs)"
3. Removing IPSec VPN tunnels support.
4. TR-069 parameter , H/W version: define the value for InternetGatewayDevice.DeviceInfo.HardwareVersion as "HW_1.0".

5. Support Apple wireless printing.

[BUG FIX]

1. [ITS:# 131200888] VMG1312 Mac OSX problem , If customer are using a Mac product with OS version 10.6.8, then the Mac will start freeze when it is connected to VMG.
2. [ITS:#131202477] Customer use the FTP method to upload the config file into VMG1312-B10A.It is no problem with PC Windows 7 , but the error displayed with PC WinXP SP3. Exp : put D://configure.conf
3. [ITS:# 140300667] VMG1312 LAN services exposed to WAN, Scan result that we can see open ports 139 and 445 for Samba file share for USB, open port 631 for printer share for USB and open port 5431 for UPnP. These services must be restricted to LAN only.
([As mail #140300667](#))
4. [India TATA] Device is taking very long time to login using HTTPS
(AAJZ0)C0_20140310

Default Settings in V1.00(AAJZ.6)C1

Refer to the XML format file “*.rom” in FW release package.

- Username and password:
 - (1) admin/1234
 - (2) zyuser/1234
- GUI configuration: http://192.168.1.1/
- How to enter sh mode: enter sh in main menu.

Public Domain Software Announcements

The following public domain software are used in this firmware release:

- MIPS Linux kernel, version 2.6.30
<http://www.linux-mips.org> or <http://kernel.org>
- Bridge-Utils
<http://bridge.sourceforge.net>
- BusyBox 1.0.0 toolset
<http://www.busybox.net/>
- Dproxy: dproxy-nexgen
<http://dproxy.sourceforge.net>
- ebtables 2.0.6
<http://ebtables.sourceforge.net>
- bftpd 1.0.24
<http://www.bftpd.org/>
- iproute2 iproute2-2.4.7-now-ss020116-try.tar.gz
<http://www.linuxgrill.com/anonymous/iproute2>
- iptables-1.3.8
<http://www.netfilter.org>
- udhcp 0.9.6
<http://udhcp.busybox.net/>
- zebra 0.93a
<http://www.zebra.org/>
- ppp 2.4.1
<http://www.roaringpenguin.com/pppoe>
- Ssh server: dropbear v0.46
<http://matt.ucc.asn.au/dropbear/dropbear.html>
- openssl: openSSL library v0.9.7f
<http://www.openssl.org>
- Dnsmasq: 2.48
<http://www.thekelleys.org.uk/dnsmasq/>
- Ssmtp : 2.62 GPLv2
<http://packages.debian.org/lenny/ssmtp>
- Dhcpv6
<http://sourceforge.net/projects/wide-dhcpv6/>